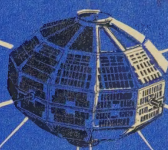


Canada - Industries and Resources

Government  
Publication



UNIVERSITY OF TORONTO  
Library Department




3 1761 11969229 1

A1  
C  
007

**ENGINEERED  
EQUIPMENT  
FROM CANADA**





Digitized by the Internet Archive  
in 2024 with funding from  
University of Toronto

<https://archive.org/details/31761119692291>

UNIVERSITY OF TORONTO LIBRARY  
Reference Department

Government  
Publications

CAI  
TC  
- 7007

# ENGINEERED EQUIPMENT FROM CANADA

AT THE

1963 DESIGN ENGINEERING SHOW

NEW YORK COLISEUM

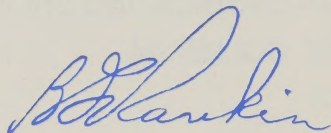
MAY 20 - 23

Produced by Authority of  
The Minister of Trade and Commerce

DEPARTMENT OF TRADE AND COMMERCE, OTTAWA, CANADA



We take pleasure in welcoming you to the Canadian Exhibit at the 1963 Design Engineering Show in the New York Coliseum, May 20 to 23. This booklet describes the Canadian products being exhibited, and also lists the various exhibitors. Representatives of the participating companies and the Canadian Department of Trade and Commerce will be pleased to answer enquiries from interested businessmen at the Show. Information on the many quality products and services available from Canada can be obtained at any time from this office.



B. I. Rankin  
Deputy Consul General (Commercial)  
Canadian Consulate General  
680 Fifth Avenue  
New York 19

## FROM SATELLITES TO BUSINESS MACHINES

Once again Canada brings to the Design Engineering Show a selection of quality products which confirm her position as a world leader in engineering design and manufacture. Many of Canada's design engineering achievements of the past now enjoy international acceptance; the Canadian Exhibit at the 1963 Show in New York clearly indicates that Canada continues to provide new and exciting contributions in this highly specialized field. This year, 12 Canadian companies are participating under the sponsorship of Canada's Department of Trade and Commerce.

Tracking stations throughout the world are currently tuned to Canada's first satellite, the Alouette, which since last September has been sounding the ionosphere and faithfully transmitting its findings to earth. Visitors to the 1963 Design Engineering Show will have an opportunity to inspect a model of the Alouette, as well as one of its most remarkable components — the revolutionary STEM sounding antenna system, conceived and developed entirely in Canada. This unusual but basically simple system, which stores extendible antennas of almost unbelievable length in extremely light and compact units, is already recognized as a major breakthrough in the development of antennas for space vehicles, and is now being incorporated in the United States sounding satellite TOPSI. In addition, the STEM system has a wide variety of ground applications.

An interesting new Canadian business machine will also be displayed in the Canadian Exhibit — a document transcriber for the preparation of docu-

ments containing fixed information from a large file. This self-contained unit has an extremely high density code and permits quick and easy access by the operator to a file of approximately 200,000 line items. In addition, the operator can enter variable information, by means of a keyboard, at pre-programmed stops. The document transcriber is ideally suited to sales-order entering, invoicing, preparation of purchase orders and automatic letter-writing. Last year, 200 units were installed in the offices of a large Chicago mail-order company.

These are but two examples from the diverse selection of outstanding Canadian products which may be seen at the New York Show. Others include communications equipment, aeronautical devices, mechanical and hydraulic equipment for all branches of industry, automotive servicing equipment, photographic processing equipment, a new system of structural connection for the construction industry, and many others.

These products are described in detail on the following pages. They are well worth your attention at the 1963 Design Engineering Show.

## INDEX

Canadian Westinghouse Company Limited	6
The de Havilland Aircraft of Canada, Limited	8
Ferranti Electronics	10
Gearmatic Co. Ltd.	12
Lucas, Rotax Ltd.	14
Octopus Products Limited	16
Presentey Engineering Products Limited	18
Raceway Manufacturing Limited	20
Rubber Machinery Shops Division, Dominion Rubber Company Limited	22
Russell Industries Limited	24
Thermovolt Instruments Co. Ltd., Triodetic Structures Division, F. Fentiman & Sons Ltd.	28
Department of Defence Production	30
Industrial Promotion Branch	31
Information	32



## CANADIAN WESTINGHOUSE COMPANY LIMITED

P.O. Box 510

Hamilton, Ontario, Canada

### LINATROL CO-ORDINATE CONTROL

Established in 1903, Canadian Westinghouse is now the second-largest electrical manufacturer in Canada, with 15 plants and a total manufacturing area of approximately 3,000,000 square feet. In addition, the company operates a research development laboratory which includes electrical, mechanical, chemical and metallurgical sections. Annual sales for the past five years averaged \$135,000,000, and distribution covers 38 countries.

One of the company's newest products is the Linatrol co-ordinate control, an automatic electronic line-tracing device for machine control. The Linatrol originally was developed for use on gas-cutting machines and has been used successfully in that field for over six years.

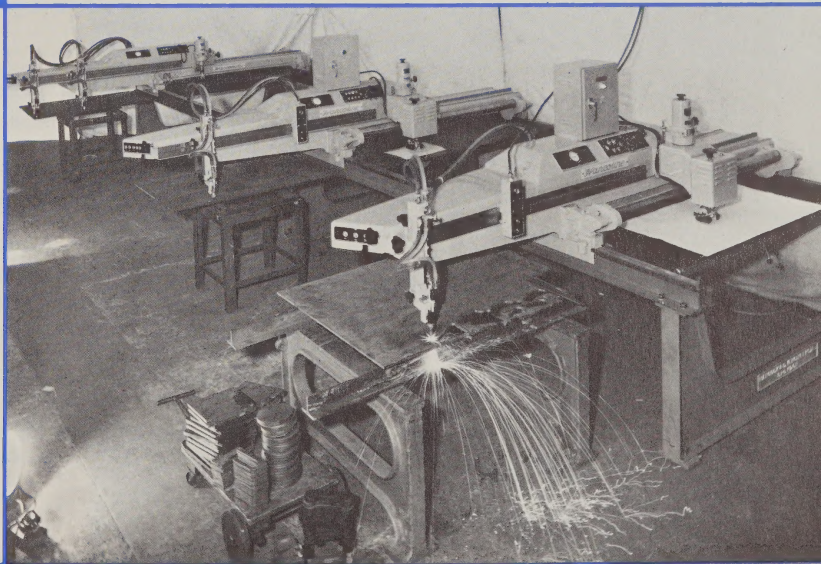
With the introduction of the co-ordinate control and the increased thrust available, the Linatrol can now control cutting operations where considerable pressure is required to make the cut.

Basic component of the Linatrol is the sensing head, an optical-electronic device which is able to follow the path of a line on a drawing with an accuracy of better than plus-or-minus 0.010 of an inch from the exact centre of the line. The cornering radius is 0.03 of an inch, and the unit is unaffected by changes in light value, voltage or other variable factors.

The control of engraving and milling machines, routers and saws is now possible with the Linatrol co-ordinate control.



A demonstration of the Linatrol co-ordinate drive, manufactured by the Electronics Division of the Canadian Westinghouse Company Limited, an advanced version of the automatic electronic line tracer, with drive units having a capability in excess of 300 pounds' thrust at 50 inches a minute.



## THE DE HAVILLAND AIRCRAFT OF CANADA, LIMITED

Special Products  
and Applied Research Division  
Malton, Ontario, Canada

### AIRCRAFT AND SATELLITE COMPONENTS AND ACCESSORIES

The Special Products and Applied Research Division of The de Havilland Aircraft of Canada, Limited, has developed a variety of unique and highly specialized products for military and civilian applications.

The de Havilland Storable Tubular Extendible Member (STEM) system, which allows long antennas or booms to be stored in a minimum of space, is an outstanding feature of Canada's sounding satellite Alouette, now circling the globe and recording important data.

STEM, which can extend antennas more than 900 feet, consists of a very thin metal tape, heat-treated to assume a tubular shape when unrestrained, wound on a motor-driven drum. When antenna extension is activated, the tape passes through a guidance system and assumes

a tubular shape with a 180-degree overlap.

STEM devices are now being developed for ground requirements such as antenna masts and instrument booms. They are electro-mechanically operated, relying upon neither hydraulic, pneumatic nor explosive actuating systems.

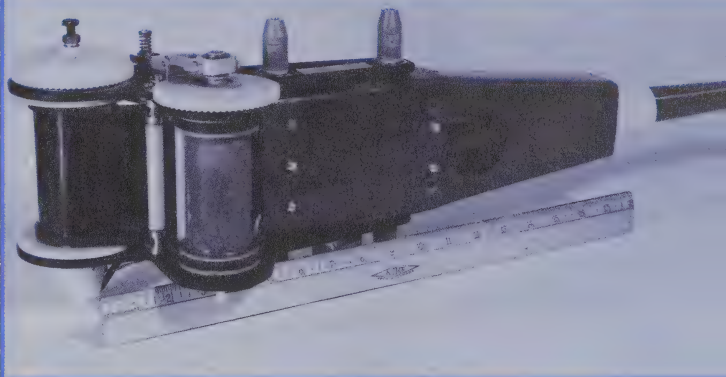
For survey work, de Havilland's Airborne Profile Recorder (APR) is a versatile instrument combining close accuracy up to 45,000 feet with compact design. Terrain profile is recorded on a high-speed chart that may be correlated to the geographic position by simultaneous vertical photography. Another survey instrument, the Type 327 portable magnetometer, is a sensitive precision instrument for measuring the

From a lightweight, compact boom about 18 inches long, two of the Alouette's four sounding antennas extend to a length of 75 feet. The satellite's STEM antennas were developed and manufactured by The de Havilland Aircraft of Canada Limited.

earth's magnetic field.

In the field of photography, de Havilland offers its T246 Tri-Film Processor and Mark VII Instrumentation Camera. The Processor can process micro-film to the most exacting standards, and can accept combinations of various film widths for simultaneous processing. The unique design of the Mark VII Instrumentation Camera makes it completely flexible throughout the entire field of instrumentation and aerial survey positioning photography.

The de Havilland solid-state power conversion devices will interest military personnel because of their reliability, ruggedness and low weight, compared with rotary equipment of equivalent output.



## FERRANTI ELECTRONICS

A Division of Ferranti-Packard Electric Limited  
Industry Street  
Toronto, Ontario, Canada

### DATA PROCESSING SYSTEMS

The document transcriber engineered and produced by Ferranti Electronics is a new concept in machine reading which answers the need for preparing printed copy or data processing input directly from a file of fixed information.

Its main advantage is that it is based on an extremely high density code, permitting quick and easy access by a seated operator to a file of approximately 200,000 line items.

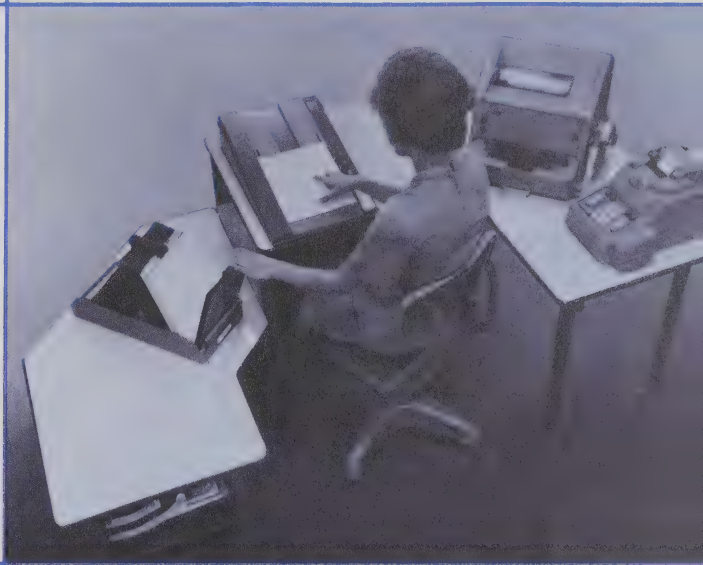
The transcriber has many time-saving applications. It is most useful where documents are

being prepared containing fixed information from a large file, together with certain variable data. Such applications are common to sales entering, invoicing, preparation of purchase orders and automatic letter writing.

Ferranti Eletronics has been engaged in electronics research since 1947, and is well known for its development of magnetic memory drum systems, photoelectric punched paper tape readers, and many other achievements in commercial, industrial and military electronics and instrumentation.



The Ferranti Electronics document transcriber has high speed of operation — 200 lines per hour — and allows the operator to enter variable information, via the keyboard, at pre-programmed stops.



## GEARMATIC CO. LTD.

7400 132nd Street

North Surrey, British Columbia, Canada

### WINCHING EQUIPMENT

This company, with its wide range of hydraulic winches, drum drives and gearmotors, has the answer to every winching job, no matter how specialized. Gearmatic units are used on hoists, cranes, side booms, logging tractors, self-loading trucks, fishing boats — in all industries where smooth and dependable winching is required.

The Gearmatic Model 2, 6 and 11 hydraulic winches bring full power and complete flexibility to the logging, engineering and construction industries. Connected to the power unit by flexible pressure hose, these compact machines can be mounted high or low at the correct angle for top efficiency of operation. These models are

available with high-speed reverse.

The company's Model 5 "Windlass" utility winch has virtually unlimited applications for lighter material-handling. With line pulls up to 1,500 pounds, this durable machine is connected to the power source by two hydraulic hoses. The clutch lever puts power-reversing or free-spooling of the drum at the operator's fingertips, and a positive brake makes the "Windlass" a completely safe unit.

Model 4 hydraulic winch is a general-purpose unit for use in all branches of industry. Its compact construction permits easy mounting in a comparatively small space. Offering a bare-drum line pull of 3,800 pounds, the Model 4 has

a full range of winching speeds, operated from a single control valve which can be located in any convenient operating position.

Gearmatic's Roto-Versal gearmotors have many applications as primary drive units for hoisting for conveying winching equipment and as universal drive units for industrial machinery. Used with a control valve with good metering characteristics, the Roto-Versal will provide a full range of speeds in both directions, with exceptionally smooth stops and starts. Its automatic brake is activated by pressure changes — any loss of pressure immediately sets the brake to prevent the load taking charge.



A Gearmatic Model 11 hydraulic winch is installed on the heelboom of this self-loading logging truck and used to yard and load 40-foot logs.

## **LUCAS-ROTAX LTD.**

5595 Royalmount Avenue  
Montreal 9, Quebec, Canada

**INDUSTRIAL HYDRAULIC AND COMBUSTION  
EQUIPMENT, AIRCRAFT FUEL AND  
ELECTRICAL ACCESSORIES**

Lucas-Rotax industrial hydraulic pumps and motors range in capacity from one to 105 gallons per hour at pressures up to 5,000 pounds per square inch. These pumps and motors are high-efficiency, axial-piston units available in fixed and variable displacement types.

The variable displacement units are unique in that the required operating control forces are reduced to "finger-tip" levels by an internal power assist. This feature can be coupled with a variable pressure compensating system to give a versatile pumping package.

Lucas-Rotax also supplies a range of heavy oil-burning combustion equipment for industrial

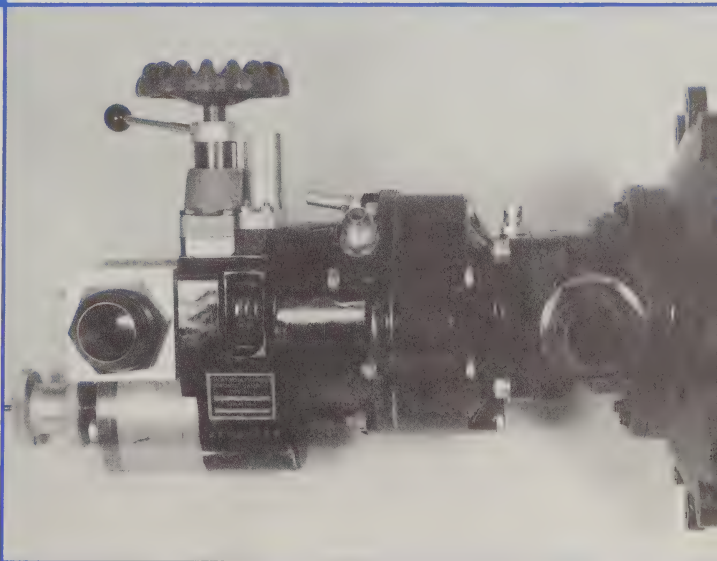
and marine boiler applications. The Lucas-Rotax suspended flame principle has proved, in service, to be extremely efficient and to be capable of continuous CO<sub>2</sub> values in excess of 15 per cent.

Lucas-Rotax Ltd. has engineered and currently manufactures gas turbine fuel system equipment for the General Electric Company, (Small Engine Division), Lynn, Massachusetts. The engine-driven after-burner fuel pump for the General Electric J85-5 engine is an example of the application of advanced creative engineering to produce a very lightweight turbo fuel pump which operates at 25,000 rpm on fuel-



lubricated bearings with excellent reliability. This pump has demonstrated an ability to perform with higher efficiencies and vapour liquid ratios than those achieved by competitive equipment.

Lucas-Rotax aircraft electrical systems include linear and rotary actuators, alternators and variable DC power supply units. Lucas-Rotax variable DC power supply is a portable unit for checking aircraft instrumentation. It is completely self-contained and self-tooled, and weighs only 30 pounds.



Lucas-Rotax Ltd. has designed and developed a wide range of fuel, hydraulic and electrical equipment, such as the industrial hydraulic pump shown here.

## **OCTOPUS PRODUCTS LIMITED**

200 Geary Avenue  
Toronto 4, Ontario, Canada

### **MODULAR ASSEMBLY SYSTEMS**

Versatility and simplicity of installation are twin features of this company's new system for the construction of storage, exhibition or display units, room dividers, bookshelves, partitions, screens and a host of similar installations.

Octopus units are lightweight and portable, and can be assembled and taken apart rapidly and easily. All components can be re-used for other applications.

The system is based on ingeniously constructed rectangular poles of extruded aluminum. The poles have 1/4-inch No. 20, serrations in recessed channels, extending full-length on

all sides. Attachments of almost any size or shape in wood, glass, plastic or metal can be secured to the poles at any desired height, simply by fastening them with a standard 1/4-inch bolt inserted into the serrated channels. No special fittings are required for the installation, and the only tool needed is a screw driver — or a dime!

Octopus Products Limited can also supply a complete range of accessories, from decorative screens and partitions in a large variety of designs to various types of shelving, cabinets, and drawer chests.

An Octopus tubular system was used to set up this art exhibit at Sears, Roebuck and Co. in Chicago.



## PRESENTHEY ENGINEERING PRODUCTS LIMITED

233 Armstrong Street  
Ottawa, Ontario, Canada

### ELECTRONICS, TELECOMMUNICATIONS EQUIPMENT

This company has designed and built, under contract with various departments of the Canadian Government, a variety of electronics, communications and electro-mechanical instruments. Products include an airborne tape recorder which is a standard component of the F-104 aircraft; a teletypewriter transmitter control unit; a multispeed, multichannel tape scanner/reproducer; a multichannel DC-amplifier system; and a multispeed tape recorder/reproducer.

For the industrial market, Presentey Engineering has developed an air pollution monitor widely used throughout Canada. The company also has developed an electronic pulse controlled reciprocating compressor.

The company's teletypewriter transmitter control is designed for remote control and monitoring of a radio transmitter, and for switching over, either automatically with an adjustable time delay, or manually, a teletypewriter between the transmit and receive DC-

loops of a teletype-telecommunications system.

The tape scanner/reproducer is for detailed study of phenomena recorded on magnetic tape. Two main operational modes, "scan" and "forward-playback", together with three-speed operation and seven-channel work capacity, permit an extremely wide variety of applications.

The multichannel DC-amplifier system, designed and built for the Royal Canadian Navy, is specially suited for transducer work with multichannel chart recorders. The six-channel, direct-coupled unit is fitted with long-life SQ-tubes and metal film resistors throughout.

The Presentey air pollution monitor continually checks smoke density in fuel-burner exhaust systems. It is installed in breechings, chimneys and similar burner exhaust systems. The monitor operates on the principle of continuous comparison of a reference light beam — proportional to the smoke density level allowable in the locality — with a variable-



Dr. C. S. Beal, Canada's Chief Dominion Astronomer, and Dr. F. Kollar, seismologist with the Department of Mines and Technical Surveys, inspect the Model TRS-73 equipment demonstrated by Mr. S. Presentey of Presentey Engineering Products Limited. The unit is a multispeed, multichannel tape scanner/reproducer.

intensity light beam proportional to the smoke density in the exhaust system under test. If the variable-intensity beam becomes equal to or darker than the reference beam, an alarm signal is tripped.

The multispeed tape recorder/reproducer records and plays back information on magnetic tape in a wide range of speeds. Information recorded at one speed can immediately be played back at another, through the resetting of a single tape-speed control knob.

The company's reciprocating compressor is a compact unit equipped with a high reciprocating frequency electrodynamic motor directly connected to the compression chamber. With this patented unit, pressure and air debit can be instantaneously controlled through a variable resistor. The equipment requires no lubrication, so that the compressed gas remains free from contamination.



## RACEWAY MANUFACTURING LIMITED

118 Laird Drive  
Toronto 17, Ontario, Canada

### WHEEL-ALIGNMENT AND WHEEL-BALANCING EQUIPMENT

To meet the transportation industry's demand for more efficient front-end wheel-alignment equipment, Raceway Manufacturing Limited has developed the Racealigner, a new kind of machine that offers accurate alignment with simplicity of operation. It is available for both cars and trucks.

The Racealigner can be operated by an inexperienced person after only a few hours' basic instruction. Ability to use ordinary tools is the only requirement to gain maximum accuracy from this machine, which offers top performance with a lower-than-ordinary equipment investment. It can be used inside or outside, cuts operation time, saves space and

makes it unnecessary to crawl under cars.

The Racealigner provides steering correction for such troubles as pulling to one side, spotty or excessive tire wear, shimmy, squealing on turns, wandering and weaving. It assures safer driving at high speeds, extended tire mileage, less driving fatigue and greater highway protection.

For accurate wheel balancing, Raceway Manufacturing Limited also makes the Racealigner Three-Point Balancer. With it, all service-station attendants can balance the wheels of any car or truck, regardless of size, and with or without brake drums.



The Racealigner Three-Point Balancer solves the problem of dynamic off-balance caused by incorrect installation of wheel weights. Wheels on all types of cars and trucks, with or without brake drums, can be correctly balanced with this device.

## RUBBER MACHINERY SHOPS

A Division of Dominion Rubber Company  
Glasgow Street  
Kitchener, Ontario, Canada

### RUBBER MACHINERY, TIRE MOULDS

Rubber Machinery Shops has been in existence for more than 40 years, manufacturing custom rubber machinery equipment, special machinery for various other industries, and moulds of all types and designs.

An outstanding example of the products made by this division of Canada's largest rubber company is the Clarkson cord-forming machine, whose unique design makes it quite different from other equipment available for the same work. The Clarkson cord former contains 224 spindles, arranged in four separate frames of 56 each. The frames are arranged side by side, with one beam warper servicing two frames.

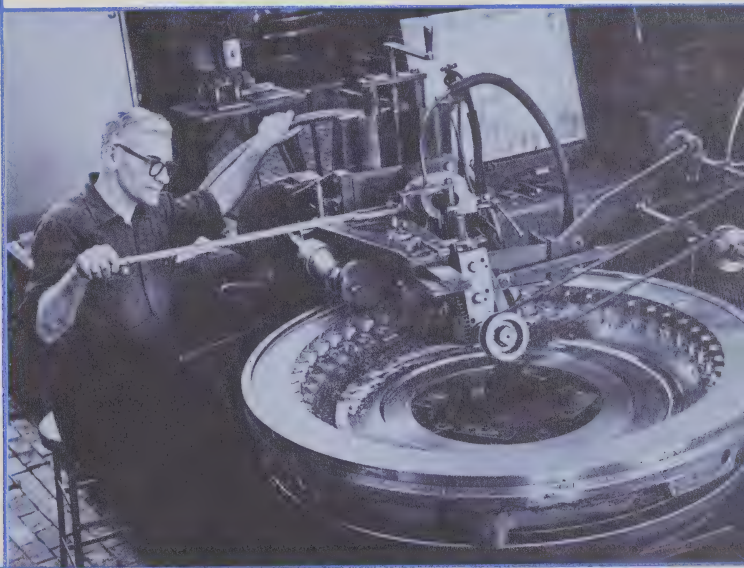
The Clarkson takes two separate sources of tire-cord yarn in single-ply form and twists them together evenly, without introducing additional turns into the original single-ply yarn.

Rubber Machinery Shops also manufactures a full range of precision tire moulds to close tolerances and with a high degree of finish.

While Rubber Machinery Shops manufactures process equipment primarily for Dominion Rubber Company Limited, more than 40 per cent of its gross sales goes to other customers. Its products are sold in the United States, Great Britain, South America and Turkey.



An operator at Rubber Machinery Shops engraves a tread design in a tire mould.



## **RUSSELL INDUSTRIES LIMITED**

207 Weston Road  
Toronto, Ontario, Canada

### **HYDROSTATIC TRANSMISSIONS INDUSTRIAL MACHINERY PRECISION GEARS**

Russell Industries Limited, through its three subsidiaries, manufactures a very wide range of machinery and equipment. Canadian Acme Screw and Gear Limited fabricates screw machine products, automotive components and automatic pinsetting machines; York Gears Limited produces precision components and a full range of precision gears; The John Bertram and Sons Company Limited manufactures machine tools and heavy capital equipment, as well as gauges, special tools, dies and fixtures used in the metalworking industries.

Of special interest is the Hydrostatic transmission designed and manufactured by Canadian Acme. A new concept in power control, this unit offers extreme flexibility of control and dynamic braking, hydraulic differential, over-

load protection and easy adaptability for constant horsepower or torque applications.

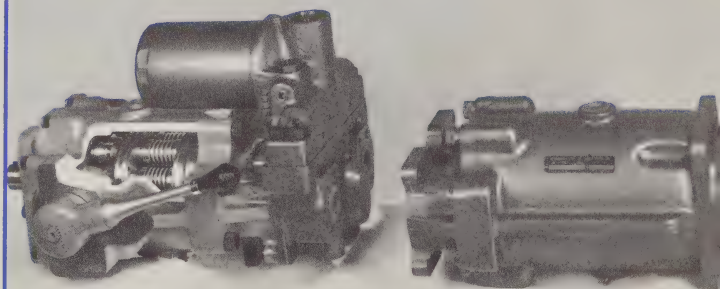
The standard Hydrostatic transmission comprises a manually controlled variable displacement hydraulic pump including pre-pressuring and overload control, with filter, and fixed displacement hydraulic motor.

There are two series of transmissions — No. 27 and No. 42. The maximum continuous operating pressure for both is 3,000 psi, and the intermittent maximum pressure 4,000 and 5,000 psi respectively. The maximum unit displacement is 2.73 and 4.22 cubic inches per revolution; the pump capacity at 1,200 rpm is 14.17 and 21.91 gpm (US), and at 2,400 rpm it is 28.34 and 43.82 gpm (US) respectively.

The Hydrostatic transmission has many applications, including drive control for combines and harvesters, front-end loaders, wheeled and crawler tractors, machine tools, main drives and feed drives. For cement mixer drums its application eliminates second engines and involved prop shaft systems.

These hydrostatic transmissions may be obtained in the United States from Webster Electric Company, Racine, Wisconsin.

The standard Hydrostatic transmission comprises a manually controlled variable displacement hydraulic pump including the pre-pressuring and overload control with filter, at left, and a fixed displacement hydraulic motor at right. It is manufactured by Canadian Acme Screw and Gear Limited, a subsidiary of Russell Industries Limited.



## **THERMOVOLT INSTRUMENTS CO. LTD.**

55 Six Point Road, P.O. Box 43  
Toronto 18, Ontario, Canada

### **PRECISION INSTRUMENTS**

Formed in 1954, Thermovolt Instruments Co. Ltd. manufactures a wide range of precision instruments for industrial and military applications.

Three current Thermovolt products are the Model NSK multipoint miniature recorder, the Model PECP electronic program controller, and the Model PEC31D, a new multi-step controller with externally adjustable differential setting.

The multipoint miniature recorder is now available for 12 points with printing speeds from one to 20 seconds per point, and chart speeds from 1/4-inch to 48 inches per hour. This instrument can be supplied complete with three-speed gearbox.

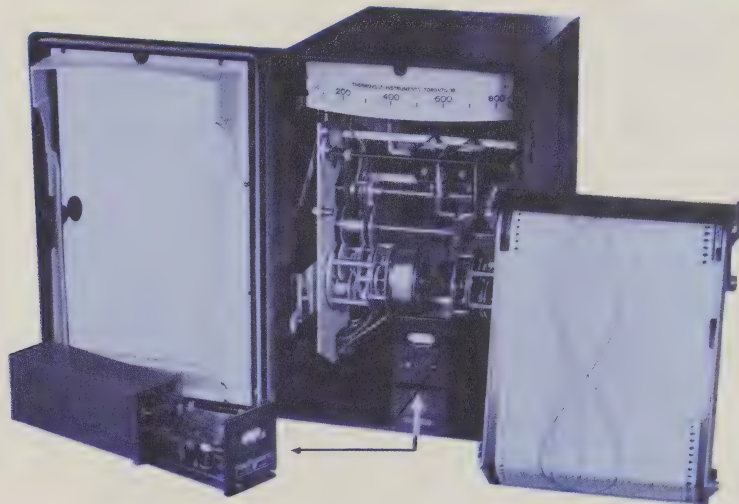
The Thermovolt program controller contains the well-known PEC electronic controller in a

compact panel-mounted case together with a variable-speed program cam, a cam-follower mechanism and an adjustable end-of-cycle switch. The instrument is supplied with one uncut transparent plastic cam. It can perform two-step on-off, three-step on-off, anticipatory proportioning, and other control functions.

The company's new multi-step controller contains two complete control circuits with the light beam pickups mounted on the same set-point arm. This instrument can be used as a differential on-off controller with adjustable "dead-band" for motorized or pneumatic control valves, gas or liquid-fueled furnaces, or as a direct pump control on pressure, vacuum or refrigeration applications.



The Thermovolt Model NSK multi-point miniature recorder has a plug-in amplifier (see arrows) which improves the speed of response to less than one second full scale, and compensates for differences in external resistance of different lengths of thermocouple and leadwire.



## TRIODETTIC STRUCTURES DIVISION

F. Fentiman & Sons Ltd.  
335 Roosevelt Avenue  
Ottawa 3, Ontario, Canada

### TRIODETTIC STRUCTURAL SYSTEMS

Devise a new and more efficient method and you open the door to success in any field. That has been the experience of F. Fentiman & Sons Ltd., developer and manufacturer of the triodetic joint.

The triodetic system is a patented structural connection which joins metal members without using welds, bolts or rivets. Basic principle is a slotted hub, and metal flats, angles, solids or tubes with ends pressed together to fit into the slots. When the end is slipped into the slot, the resulting connection has a structural efficiency greater than 90 per cent in tension. Hubs are extruded and can be made to any length or diameter, and with a variable number of slots, depending on end purpose. This system of joining lends itself particularly to steel or aluminum

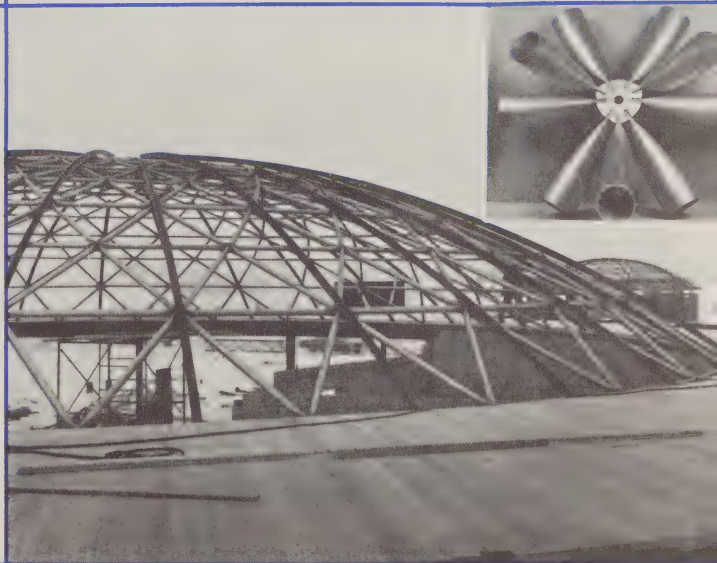
structures, and is ideal for three-dimensional effects.

The triodetic principle has been put to a wide range of uses, from easily-constructed docks to a new house in the Bahamas. One of the first tests of its strength and practical applications was the successful construction of a 60-foot paraboloidal antenna to survive 50-mile an hour winds, built for the Defence Research Telecommunications Establishment of the Canadian Defence Research Board.

Triodetic joints are now used on frames and domes for exhibition purposes; garden furniture and canopy frameworks; lightweight framework for roofs for special purposes such as grandstands.

The triodetic system was invented to solve special problems which arose when F. Fentiman & Sons Ltd., was required to design and manufacture extremely large doors for rapid operation, where high strength and low dead-weight were critical. Since then, continuous research has led to unlimited applications, and the system is in use in many parts of the world.

The triodetic system of structural connections, patented by F. Fentiman and Sons Limited, is incorporated in this dome, which will cover a modern restaurant at an Ontario gas station. A similar dome (right background) will house the station's service centre.



## DEPARTMENT OF DEFENCE PRODUCTION

Ottawa, Canada

### CANADA-UNITED STATES DEFENCE PRODUCTION SHARING

Canadian industry now actively participates in supplying defence material for U.S. defence programs, under the Canada-United States Defence Production Sharing Program which, in effect, adds Canadian suppliers to U.S. domestic source lists.

The immediate objective of the plan is to increase Canadian participation in the production and support of North American defence weapons and equipments. The long-range purpose is to co-ordinate the defence requirements, production and procurement of the two countries. As a result, it has been agreed that Canadian

defence industry will be allowed equal opportunity to participate with U.S. industry in meeting U.S. defence requirements.

The Canadian Department of Defence Production is responsible for the administration of Canadian activities under the Defence Production Sharing Program. United States interests are invited to investigate the many advantages of procurement from Canada. Enquiries may be addressed to: Canadian Co-ordinator of Defence Production Sharing, Department of Defence Production, Ottawa, Canada.



## INDUSTRIAL PROMOTION BRANCH

Department of Trade and Commerce  
Ottawa, Canada

### MANUFACTURING IN CANADA — ADVICE AND INFORMATION

For companies planning Canadian facilities or a manufacturing affiliation, the Industrial Promotion Branch provides a variety of services and information, such as the following:

- Information on establishing a plant or locating sources of supply.
- Statistical and market data on Canadian production, imports and exports.
- Special import studies of individual products normally grouped under general classifications.
- Introductions to Canadian firms looking for new products to manufacture under license, contract, or other arrangement.
- Advice and guidance on laws, regulations and other matters pertaining to the establishment and conduct of business in Canada.
- Introductions to associations, government agencies, provincial governments and municipal industrial commissioners.
- Location of sources of specialized and technical data.

Briefly, the Industrial Promotion Branch is well-equipped to provide essential data, information, advice and introductions which otherwise would necessitate a multiplicity of sources. An officer of this Branch will be available for discussion with interested visitors and exhibitors at the Design Engineering Show. Appointments may be arranged by leaving a message at the Canadian Exhibit or by getting in touch with the Deputy Consul General (Commercial) at the Canadian Consulate General, 680 Fifth Avenue, New York City 19. Telephone: JUdson 6-2400.

## INFORMATION...

Officials of the Canadian Department of Trade and Commerce and representatives of participating firms at the 1963 Design Engineering Show in New York will answer enquiries from interested businessmen. In addition, Canada maintains the following trade offices in the United States:

### BOSTON

Consul and Trade Commissioner  
Canadian Consulate General  
607 Boylston Street  
Boston 16, Massachusetts  
Tel: COngress 2-1245

### CHICAGO

Consul and Senior Trade Commissioner  
Canadian Consulate General  
111 North Wabash Avenue  
Chicago, Illinois  
Tel: RAndolph 6-6033

### DETROIT

Consul and Trade Commissioner  
Canadian Consulate  
1139 Penobscot Building  
Detroit 16, Michigan  
Tel: WOodward 5-2811

### LOS ANGELES

Consul and Trade Commissioner  
Canadian Consulate General  
510 West Sixth Street  
Los Angeles 14, California  
Tel: MAdison 2-2233

### NEW ORLEANS

Consul and Trade Commissioner  
Canadian Consulate General  
Suite 1710  
225 Baronne Street  
New Orleans 12, Louisiana  
Tel: JACkson 5-2136

### NEW YORK

Deputy Consul General (Commercial)  
Canadian Consulate General  
680 Fifth Avenue  
New York City 19, New York  
Tel: JUdson 6-2400

### PHILADELPHIA

Consul and Trade Commissioner  
Canadian Consulate  
3 Penn Center Plaza  
Philadelphia 2, Pennsylvania  
Tel: LOcust 3-5838

### SAN FRANCISCO

Consul General  
Canadian Consulate General  
333 Montgomery Street  
San Francisco 4, California  
Tel: YUkon 1-2670

### SEATTLE

Consul General  
Canadian Consulate General  
The Tower Building  
Seventh Avenue at Olive Way  
Seattle 1, Washington  
Tel: MUtual 2-3515

### WASHINGTON

Minister (Economic)  
Canadian Embassy  
1746 Massachusetts Avenue, N.W.  
Washington 6, District of Columbia  
Tel: DEcatur 2-1011



PRODUCED BY THE EDITORIAL AND ART SERVICES DIVISION  
TRADE PUBLICITY BRANCH  
DEPARTMENT OF TRADE AND COMMERCE, OTTAWA

PRINTED BY  
LECLERC PRINTERS LIMITED  
UNDER THE AUTHORITY OF  
ROGER DUHAMEL, F.R.S.C., QUEEN'S PRINTER  
OTTAWA, CANADA  
CATALOGUE No. C-65-3263

PRINTED IN CANADA ON CANADIAN PAPER